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Diseases in convalescence

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By

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of

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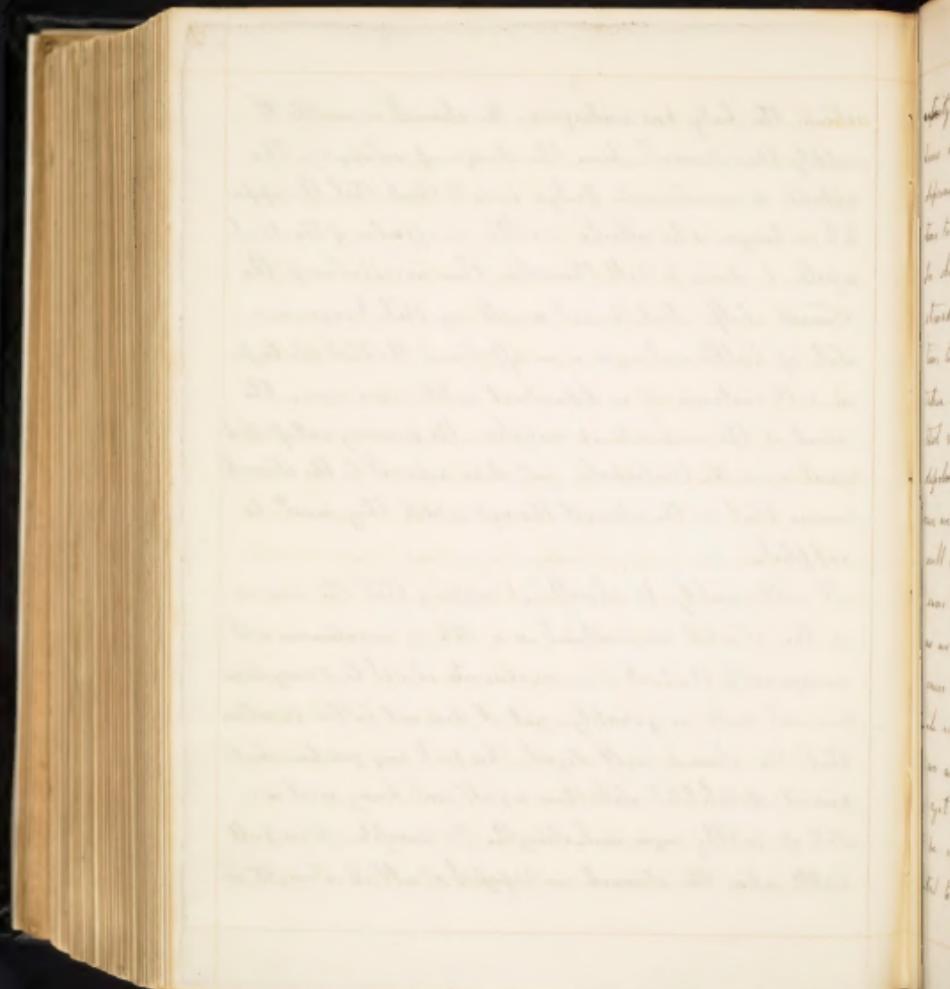


It is often said that "to eat little and often, is a golden rule in convalescence". We shall now examine this rule. It is a fact universally admitted, that regularity in our habits of life, contributes much to the preservation of health, and not among the least important of these, is regularity in the periods of taking our food — you all know what feelings are excited if we miss of our accustomed meals, even for a few hours. These are morbid feelings, and form the first link in the chain of disease. It is true that the regularity of our habits are disturbed by disease, yet not in so great a degree as to indicate that tendency which the system has to be influenced by its accustomed habits; and suppose this tendency is in a measure annihilated is it not evident that the sooner we can restore it to its former mode of action the better? In this consistency with the removal of disease, for until the former or accustomed mode of action is restored there is disease. Hence arises the great appetite in convalescence. It would seem to be the organs of nutrition demanding the materials of nutrition from the stomach to supply the great loss of substance

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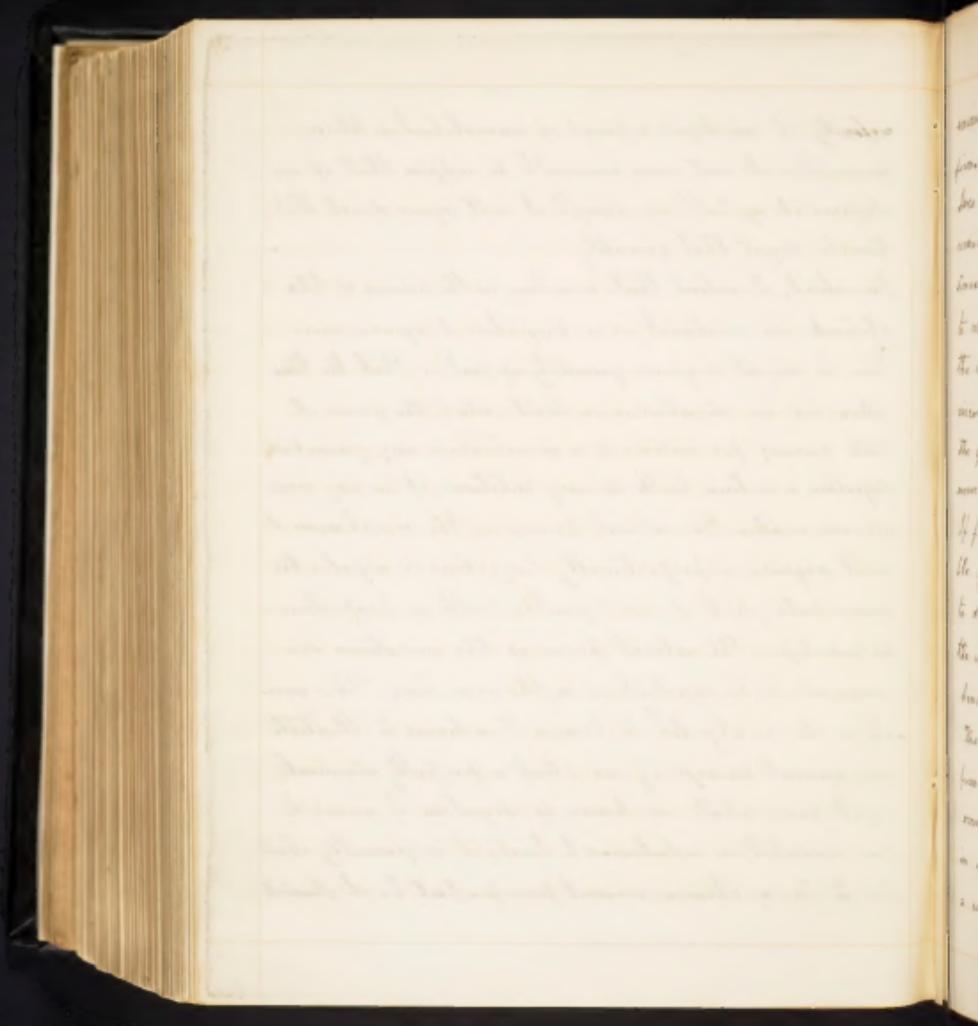
which the body has undergone. The stomach is unable to supply this demand hence the danger of satisfying the appetite in convalescence. For Jyee seems to think that this appetite, or hunger as he calls it, is rather an affection of the blood vessels, a desire to fill themselves than an affection of the stomach itself. But he had as well say that hunger in a state of health and vigor is an affection of the blood vessels for in both instances it is dependant on the same cause; the want of the materials of nutrition the primary want of which want is in the blood vessels. yet it is referred to the stomach because that is the channel through which they must be supplied.

It will readily be admitted I suppose, that the powers of the stomach are weakened in a state of convalescence and consequently the food for convalescents should be of easy digestion and small in quantity. yet it does not follow from this that the stomach will digest this food any quicker in its present debilitated state than a full and heavy meal in a state of healthy vigor and strength. For example, if in full health when the stomach is professed of all its strength and



reflexity it can digest a pound of animal food in three hours does it not seem reasonable to suppose that if we deprive it of half its strength it will require double that time to digest that quantity?

In short, I contend that according as the powers of the stomach are weakened, so in proportion it requires more time to digest a given quantity of food, or that the time taken up in digestion is in direct ratio to the powers of that viscera; for instance, if a menstruum in any given time, dissolves a certain bulk of any substance, if in any manner we weaken the solvent power of the menstruum it will require a proportionately longer time to dissolve the same bulk, but if we leaven the bulk in proportion as we leaven the solvent power of the menstruum we cause it to be dissolved in ~~in~~ the same time. This simile will be objected to, because I endeavor to illustrate an animal process by one which is perfectly chemical, yet from what we know of digestion it seems to be somewhat a solution; at least, it is generally admitted to be a chemico-animal process but be it chemico-



animal or mechanical, my simile is just, and my position firm.

Does this affect the golden rule "eat little and often in convalescence"? The former part of "eat little" is good advice—convalescents from acute diseases cannot be too careful not to overload the stomach, for generally, the more debilitated the system is, the more irritable it is, and of course, the circulation is more disturbed. The stomach partakes of the general irritability, and if overloaded with food never fails to produce a febrile state of the system. If food be taken in too great a quantity or of an indigestible quality, the stomach in its weakened state is unable to digest it; it is therefore either rejected or passing through the intestinal canal there provokes a source of irritation—hence diarrhoea dysentery colic &c.

The food taken may also be of too nutritious a quality from which may be formed too much chyle and thus overload the blood-vessels which like the stomach are in a debilitated condition and unable to bear more than a certain quantity of blood. They seem to be something like



a hydraulic machine which can bear a certain quantity of refuse but if we, in any manner increase the quantity we ruin the machine. Then we cannot be too careful to regulate the quality as well as quantity. We do not regulate the quantity of food by the waste in the system but by the power of the stomach to supply that waste without producing an unhealthy condition of the system at large.

All Physiologists agree that the gastric juice is the principal agent in digestion and that this juice is composed of different qualities in different animals according to the nature of their food - for the stomach of the dog will digest bone with facility - some of the animal of birth whilst they are little if at all acted on by the human stomach. It has been conjectured and I think with great plausibility, that each substance in coming in contact with the stomach produces a secretion adapted to its own solution and digestion. This opinion receives some support from the fact that simplicity in diet contributes so much to health and the



worse or that a multifarious diet is such a prolific source
of disease, besides we are totally unable with our present
knowledge of chemistry to make any thing like a universal
solvent or to know by what laws the same fluid acts
in a different way on different substances; or even we
to strain our deductions from the circum chemical law
we should say that the properties which would enable
it to act on one substance would render it incapable
of action on another of an entirely different nature;
Indeed this would seem to be rendered more probable if
what has been asserted be true that bile is occasionally
forced into the stomach for the digestion of some article
and the last fact gains support from the circumstance
of the biliary duct of some animals opening into the
stomach. ~~Valerius~~: relates the case of a man's having the
ductus communis obliteratus opening into the stomach and
says that he was noted for the voraciousness of his appetite
It may be asked why if there are different solvents
in the stomach does not bone &c call forth their own par-
ticular solvents? In answer I state that I do not contend



for an indefinite number of solvents, but a number differing as substances differ which are capable of offering nutriment to the system or that those substances which are indigestible paralyze the secretions below the standard of vigorous reaction" and consequently produce an abnormal state.

Though it is merely conjectural that the stomach secretes a fluid peculiarly adapted to the digestion of particular substances, yet it has been satisfactorily proven by experiment that this fluid is not always the same but under what particular circumstances it undergoes a change remains for future experiment to demonstrate. Be this, however as it may, I hold it to be very evident that substances taken in at different times are in a different state of assimilation and that these different states are differently stimulant to the system or how could the stomach ever get rid of its contents. When articles of food are first taken in they excite a retentive action of the stomach but when they are reduced to the state of chyme they excite a different



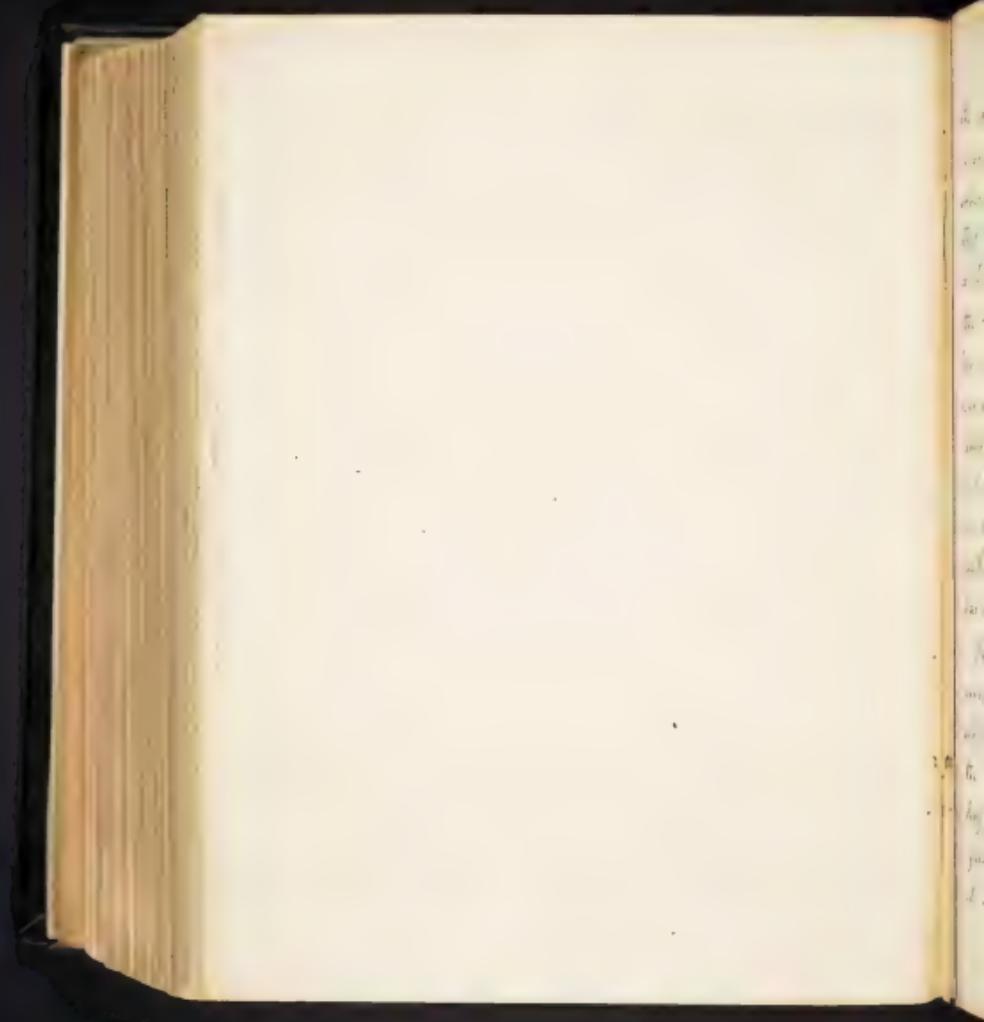
action... that is they stimulate the stomach to the discharge
of its contents.

It is quite obvious how this affects the 'golden rule' and
is in my opinion a weighty argument in favor of my position.
for I contend that if food be taken into the stomach before
the previous digestion is finished it will excite that or-
gan to irregular movements and according to what I have
said above the result of these actions is disease. for
the stomach being already in a weak and unstable con-
dition is less able than in health to sustain a perpe-
tual excitement. Every organ requires rest. The heart itself
has its intervals of repose. Though short yet such is
its nature that they are sufficient for the return of
its excitability and energy. Dr Chapman thinks that
the stomach may be compared to a school boy who
is always in mischief until employed.

"I oppose, in toto, my conscience when I deviate from such
authority (as his name is almost as old to me as any in
mine) but must say that as sacred as his opinions
are to me on all matters relating to the science of



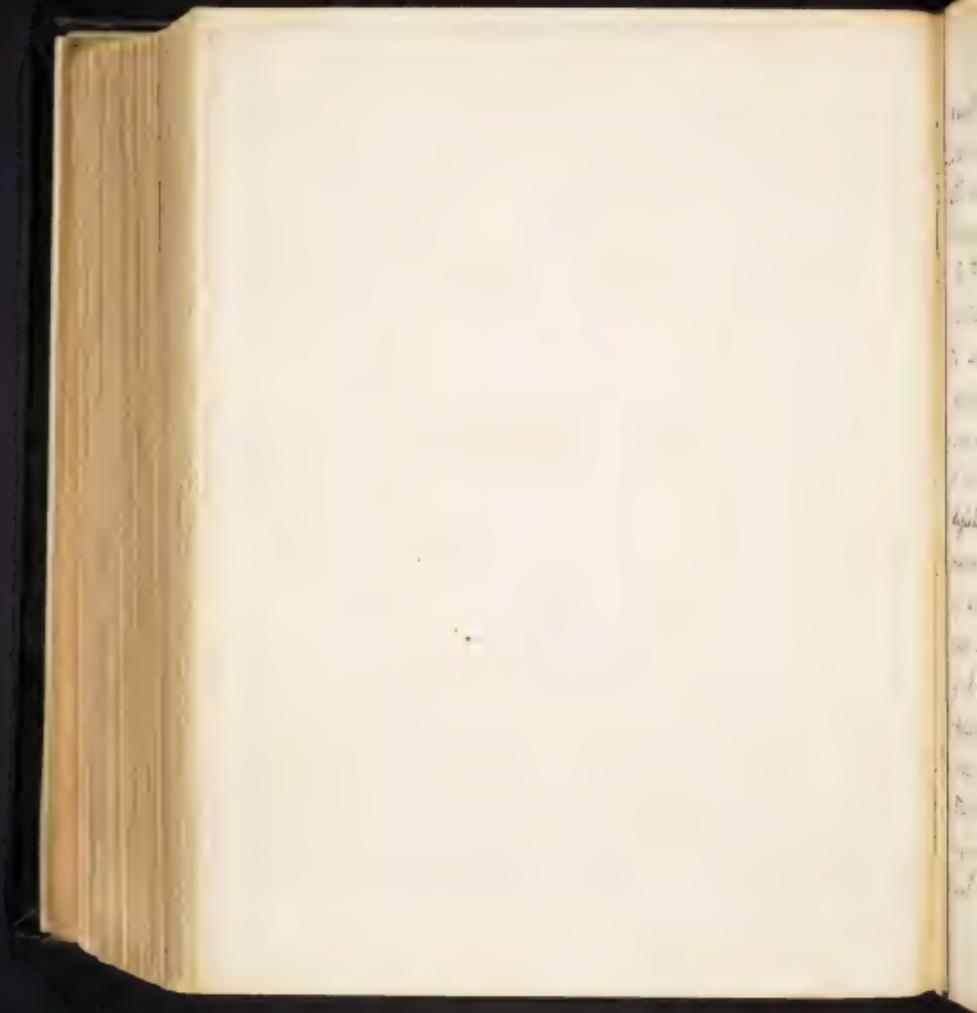
medicine I cannot differ with him on this point—
It is as I have before remarked often told people
of weak digestion to eat little and often. I again
repeat that I am very far from thinking this always
good advice and I have the authority of Dr. Paris to
say that although ~~we~~ may admit the expediency
of that maxim yet it is to be received with limita-
tions. ~~we~~ says he no one who professes any philo-
sophical knowledge will adapt his practice to the
notions of Sir William Temple who asserted what
has been above stated and that we should not allow
to the stomach any intervals of repose; to this I
answer that the conversion of aliment into blood is
effected by a series of elaborate processes, several of
which are not perfectly performed during the qua-
teness of repose. it would seem for instance, that the
process of chylification is incompatible with that by
which the first changes are produced in the stomach;
this is evident from the well known fact, that our
appetite for food ceases when the former ^{process} begins, although



the repast should at the time have been insufficient to satisfy the cravings of nature; whereas in diseases of imperfect or depraved digestion as in Diabetes we find that the appetite for food is never satisfied by the most nutritious meals. It merits notice also, that whenever the stomach is called into action during the aperient or purgative stages of digestion, the process will in weak persons be much disturbed, if not entirely suspended.

These views have long since confirmed me in the opinion of propriety of treating morbid affections in a manner very different from that which is generally pursued; and I may addle continue his that the result has been satisfactory.

The plan to which I allude; he again continues, consist in enforcing longer intervals between each meal, which should be scanty, and in quantity short of what the appetite may require; in this way are the unfeeling abscessants, induced to perform their offices with greater promptitude and activity; but he admits that it is a practice on many accounts which is always



painful to fasten and generally impossible to end
fast; but where circumstances had given him a comp-
plete and unbroken control the advantage has always
been most decisive.

To this plan of treatment I can best conclude, and
in the commencement of the paragraph above quoted
the author as far as I am able to decide confirms the
opinion which I set out to support - for says he, as
soon as chylification commences, the appetite ceases, and
I contend that a degree of appetite is a stimulant to
digestion, the bulk of which portion is to us every day
manifested. It follows then as a natural corollary that we,
by adopting "The golden rule" are disturbing the main-
prop which the system has, by a too frequent disturbance
of its salutary functions.

Again the stomach and other digestive organs besides
suffering a disturbance of their functions require like
the voluntary muscles their intervals of repose; and if
regular and stated intervals are appropriated for taking
food the appetite will by force of habit alone return at



the time and digestion will follow. On the other hand if the stomach is kept constantly on the bits, there will never be a keen relish for food or an easy and powerful digestion.

Garrison says that "those who have weak stomachs will be able to digest more food, if they take their meals at regular hours because they have both the stimulus of the aliment they take and the periodical habit to assist their digestion."

Philip says that it appears to him that with the generality of dyspeptics to take three meals in the twenty four hours is the best rule. In some cases he thinks it may be better to take four, and he expressly says that the dyspeptic should eat nothing in the interval of these meals for the contained, there is no greater mistake than that he should be constantly taking something. This disturbs the natural process and entirely prevents the recurrence of appetite a certain degree of which is a wholesome stimulant to the stomach (Philip Gardiner #66)

In some cases of urgent debility, however, he thinks there



is a necessity for taking food oftener—because say they, the stomach cannot bear enough food at one time for the due nourishment of the body if the intervals of meals be drawn out. But here he overlooked too far the important fact that in proportion as the system generally is debilitated so is the stomach and assimilating powers. Nevertheless, he has admitted, that we generally pay too little attention to this important circumstance.

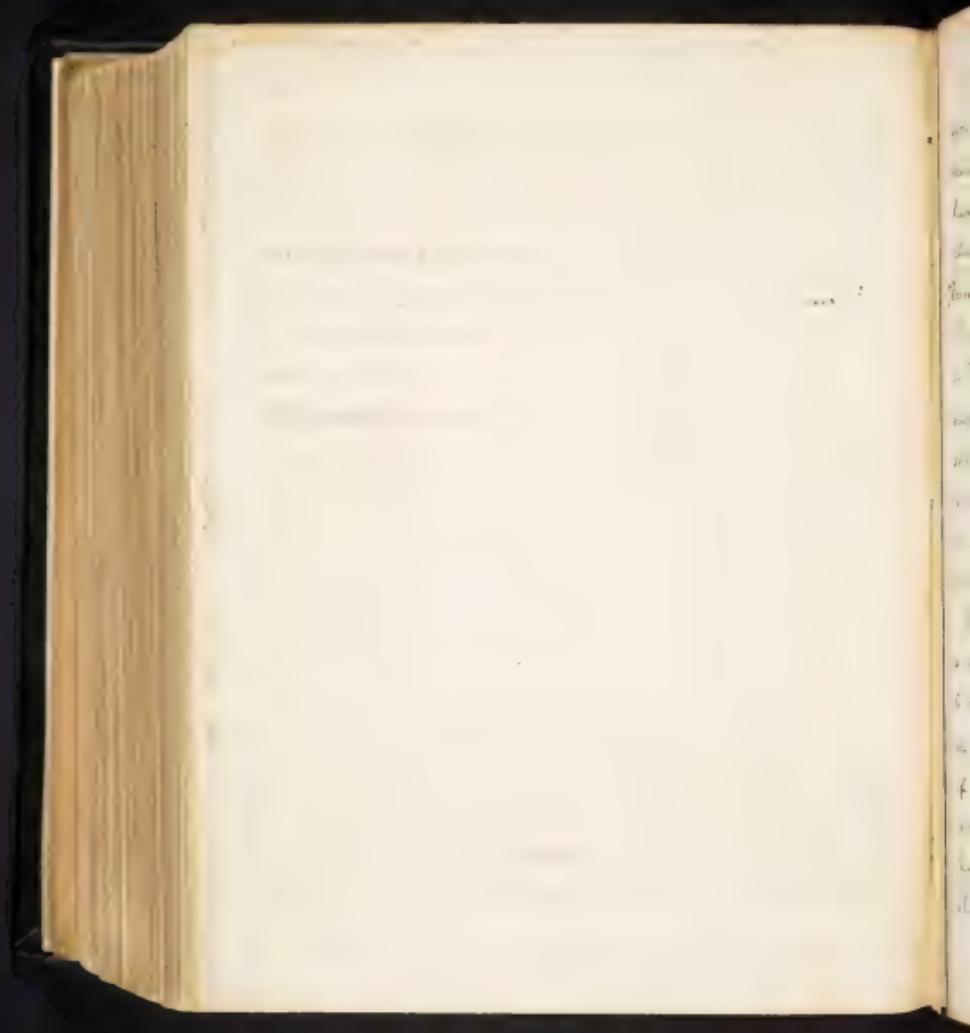
my intention, which here is made quite manifest, I hold, this time, to be quite plain and my proposition thus far established which will lead one to consider the subject in a different bearing; and —

7-9 conceive, that each action of every organ, excites a previous function, in that the sight of food prepares the mouth for its reception, that organ the stomach and that again the small intestines &c and if we irritate the stomach continually by administering tit-bits we, by interrupting its regular actions distract the system at large.

2^o-Talsalva found that he was able to stop digestion by tying the $\frac{1}{2}$ inch of nerves in a dog without opening the dog's stomach.



the contents of the stomach to be in different stages of assimilation. The experiment was repeated by Haller who relates his effects on that organ (namely the stomach) as follows. If the animal be allowed to live a considerable time after these nerves are divided in the neck and one proportion of each folded back the food remaining in the stomach we have seen if the animal has lately taken a full meal is always found undigested and nearly in the same state in all parts of the stomach, a circumstance which I was, at first greatly at a loss to explain. This effect is uniform I never saw it otherwise yet we must conceive that at the time the animal last eats there is some food more or less digested in its stomach and some gastric juice to act on a part of that just received into it. The division of the 8th pair of nerves prevents the due formation of gastric juice &c It is evident he again continues "that the undigested food must at length come in contact with the stomach. As soon as this happens, the usual secretions not being supplied, to produce the proper change in the food an unnatural motion is excited; hence the efforts to vomit which

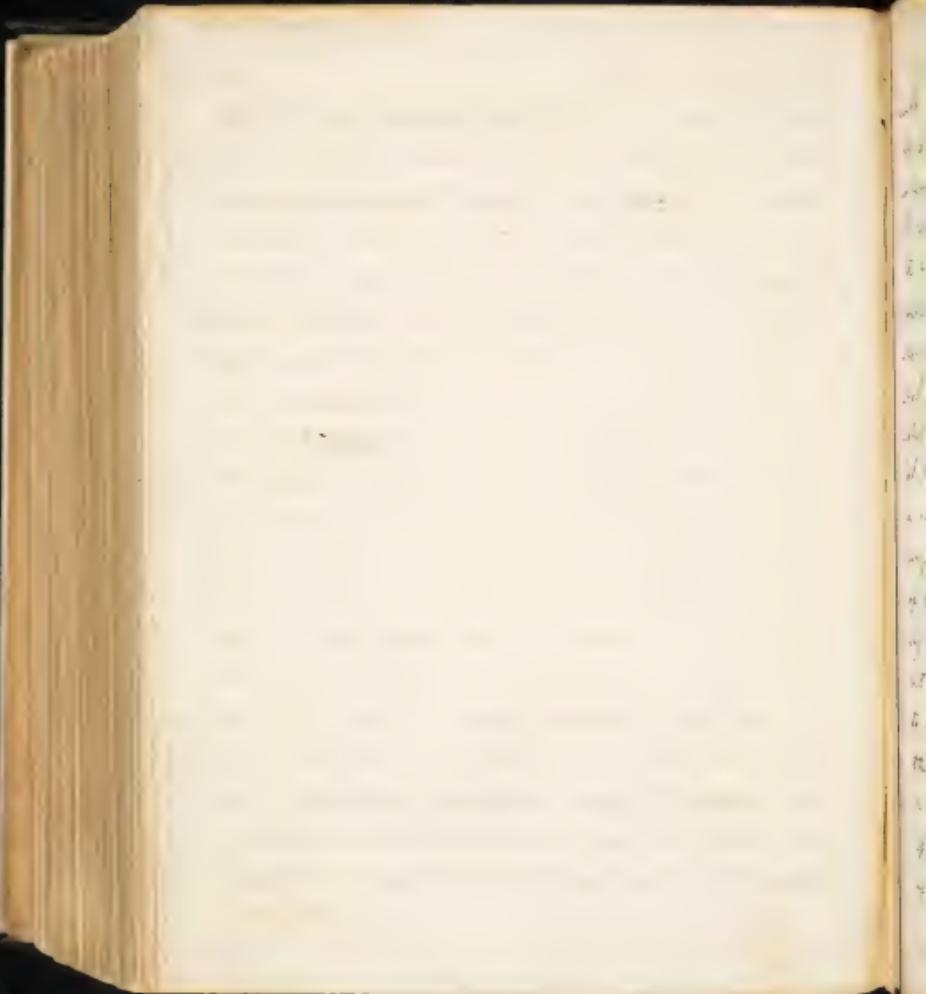


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generally occur in about half an hour or hour after the
excitation of the nerve marking the time when the stomach
having sent the contents towards the pylorus which are
already digested begins to feel the effects of undigested
matter in contact with its mucous surfaces.

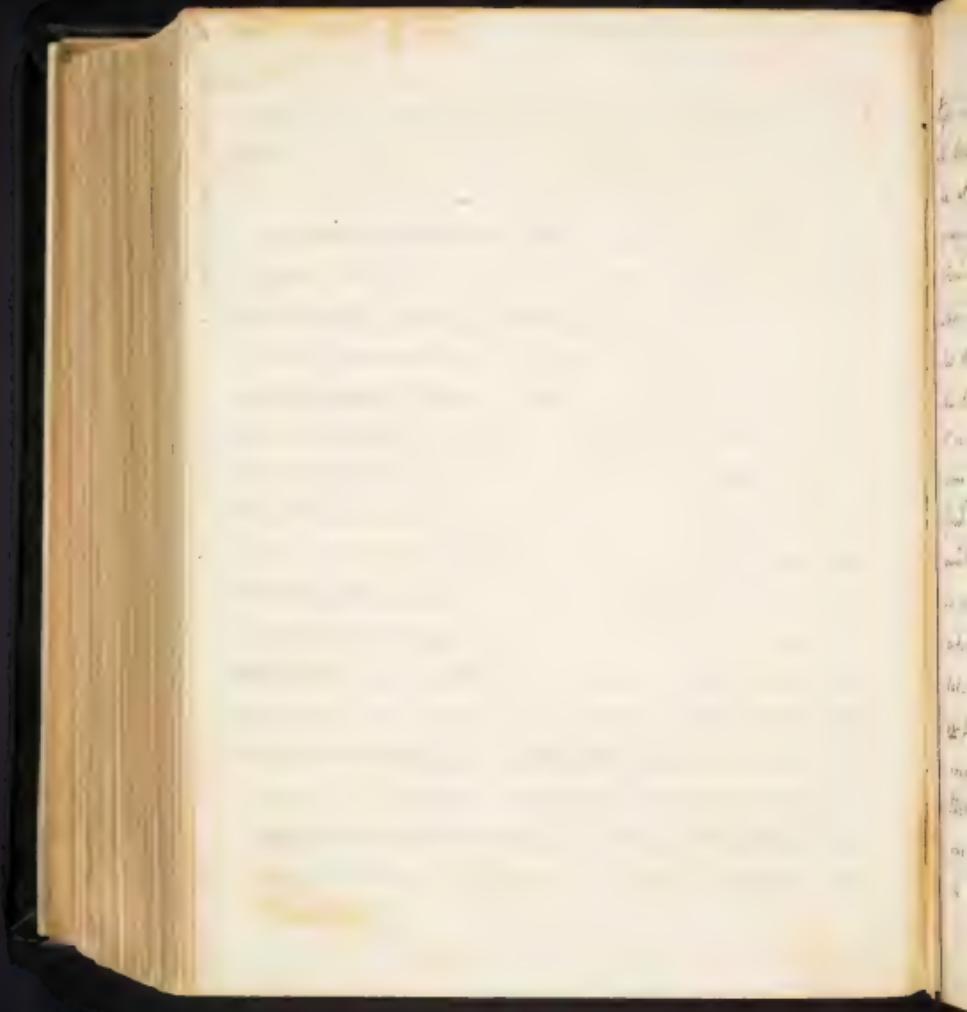
I now ask what must be the effects, reasoning "a posteriori"
of the frequent administration of food? It seems to me
evident, that its effect would be similar to those
above described. That is that they in the first place would
according to the differences of substances employed and the
times of their administration excite secretions totally dif-
ferent in their nature and effects.

But it is said that we can draw no analogy between
a healthy and a diseased process. I admit this in part
to be true. My physiological acquirements do not furnish
me with many examples which might portray this part
of my subject in an advantageous manner, but I do
not hesitate to affirm but that my faith on this point
will grow with my growth and strengthen with my
strength as a cultivation of this branch of the sciences



will unfold to me some of the mysteries of its obscure operations, and then I think I shall be convinced of the indomitable powers of habit.

I recollect some years since of reading an instance of its powers which made considerable impression on my mind. A man employed many years as toller of a church-bell in England became sick and was consequently confined but could, by his feelings, state the hours of worship to a minute, as well as though he was at his usual post. His sickness was not sufficient to overcome a sentient habit and one which could not possibly have any essential connection with the immediate organs of the individual in question. An employ'd in draining water in a machine which required 300 turns could not possibly be driven farther than was just adequate to effect that purpose. whereas the animal must, from the very nature of things, have been devoid of the power to count or by any means to calculate the number of rounds, did exist an organic impression - the force of reiterated habit - the nature of which a mere -



Type in Physiology will not pretend to decide on.

Mr Lewis A. Ford a wealthy farmer in Southampton Virginia, has, at this time a mule that was employed several years in a cotton gin. During this time he became blind but would before, and will since his blindness when turned in the field perform in an equal space his diurnal revolutions. Here the great changes which his blindness must have occasioned could not subdue habit or in other words, make an impression which would overcome the existing one.

Good in his observations, on indigestion has this word "one substantial meal of solid animal food daily is sufficient for a man in full health engaged in a life of ordinary labor - yet there are many who without any labor and from a long habit are obliged to take three or four, but the habit is a bad one and cannot be too soon broken down." It follows therefore, of necessity, that where the stomach is weak the task of digesting one full meal of animal food is the most that should be put upon it. Here we see that the stomach requires

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rest, and that it should not, as by the constant ad-
ministration of food, be disturbed in its operation.
But, I have said enough on this subject, and only
regret that I have not been able to treat it with
the justice which its importance demands, but must
be content with the thought of having done my best. -

